U.S. Census Bureau's

MAF/TIGER Enhancements Program – An Update

Presented by

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IGUM/ISGUM

MAF/TIGER Enhancement Program (MTEP)

- **Why MTEP?**
  - **MAF/TIGER Issues**
- **Five Objectives of the MAF/TIGER Enhancement Program**
- **MAF/TIGER Accuracy Improvement Project (MTAIP)**
  - **Three Focus Points**
- **Geographic Partnerships**
  - **National**
  - **Regional**

Why MTEP?

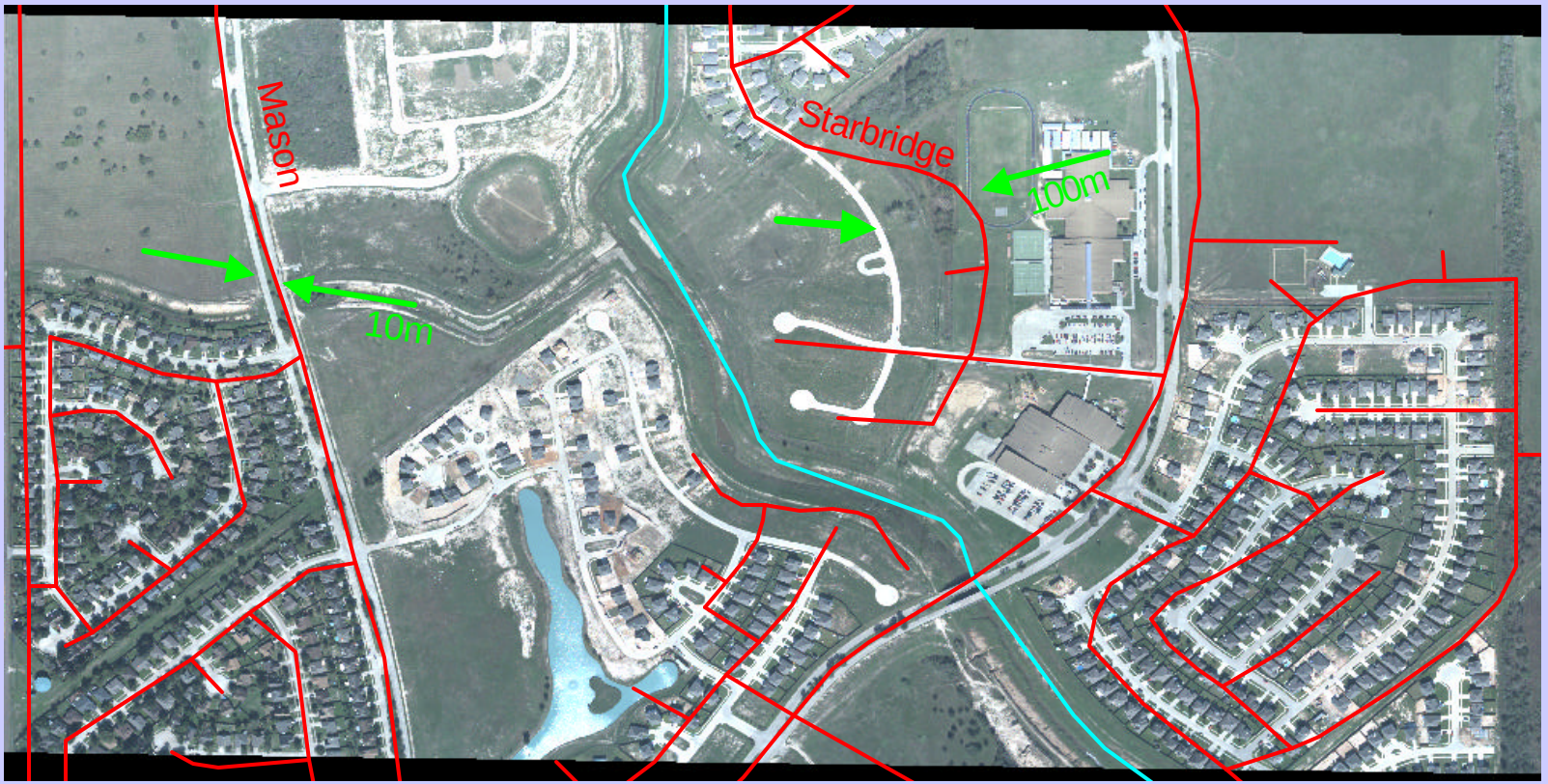
- The MAF (Master Address File) and TIGER (Topologically Integrated Geographic Encoding and Referencing) systems were…
  …developed to support the Census Bureau's mission of collecting and cataloging accurate demographic and geographic data.

- Out of date…The Geography Division developed the TIGER System during the early 1980s and the MAF during the 1990s.

- Quality..The features in TIGER are a mass of information that has been compiled over more than 30 years using sources that ranged in accuracy, to the perceptions of the field staff as they add new streets and addresses without the aid of electronic location systems.

Why MTEP?
MAF/TIGER Issues

Location information of Mixed/Variable Accuracy

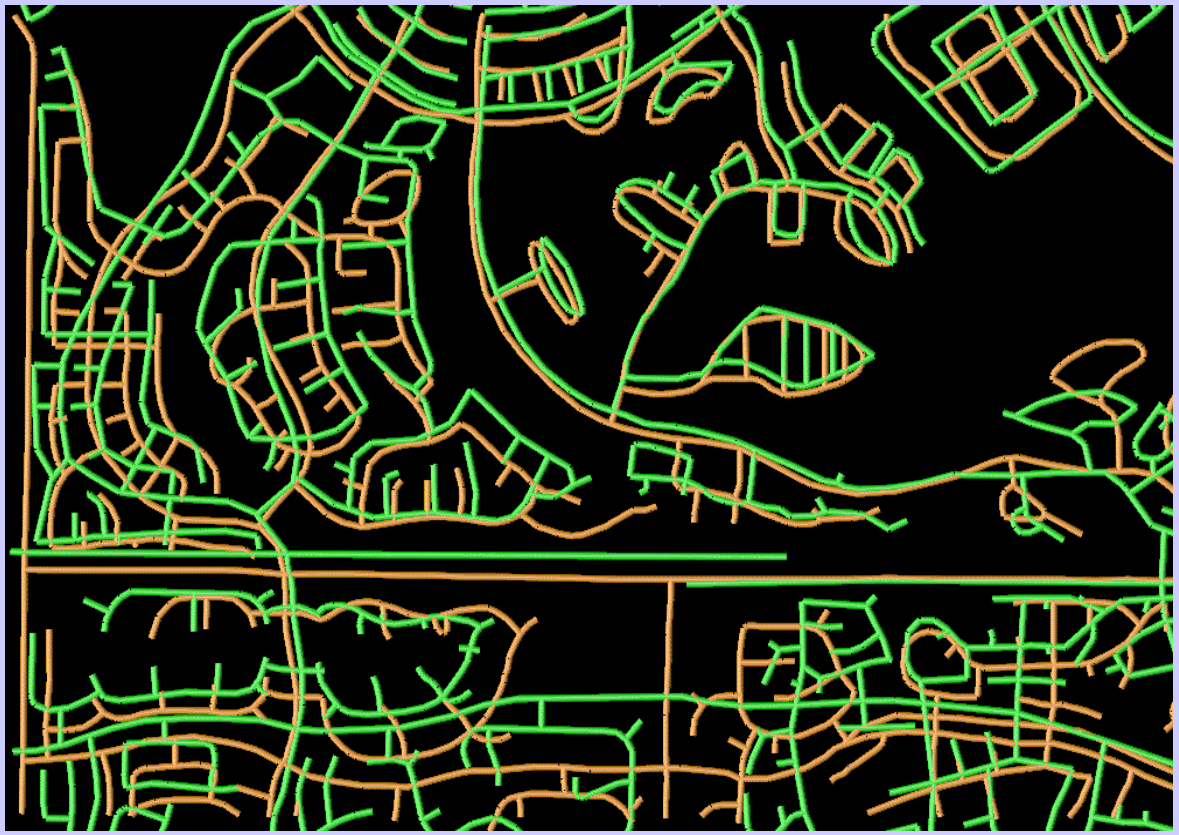


Why MTEP?
MAF/TIGER Issues

"Truth" contradicts existing Feature Topology

Why MTEP?
MAF/TIGER Issues

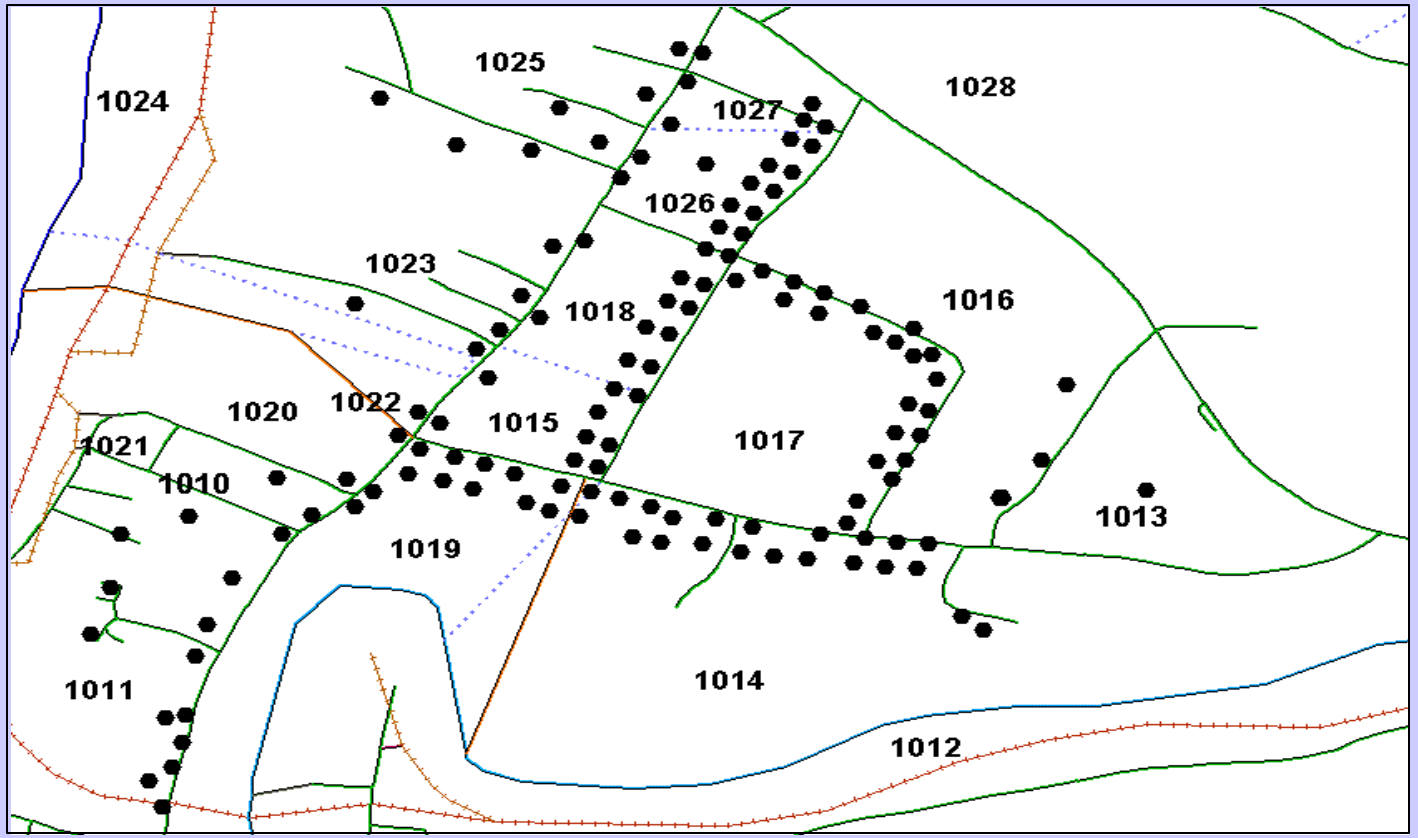
Constrains Efforts to Share Digital Data



TIGER
Local GIS

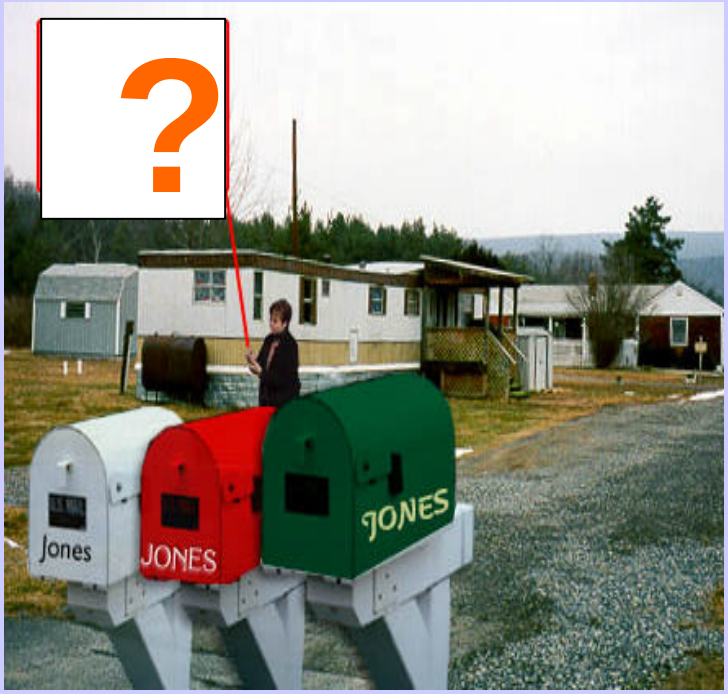
Why MTEP?
MAF/TIGER Issues

Precludes the use of GPS locational Technology



Why MTEP?
MAF/TIGER Issues

No process for updating non city-style address areas



MAF/TIGER Enhancement Program (MTEP)

Solution:

- **M**AF/**T**IGER **E**nhancement **P**rogram
- Will "modernize and resolve" several aspects and issues of the MAF/TIGER system
- Activities directly support the Adminstration's Geospatial One-Stop E-government initiatives in compliance with the requirements of the Government Paper Work Elimination Act, OMB circular A-16, and Executive Order 12906.

The 5 Objectives of MTEP

1. MAF/TIGER Accuracy Improvement Project (MTAIP)

- **Correctly locate every street and other map feature in the TIGER database, each MAF address, and to implement an effective automated feature change detection methodology.**

The 5 Objectives of MTEP

1. MAF/TIGER Accuracy Improvement Project (MTAIP)
2. **Modern MAF/TIGER processing environment**
   - **Develop/deploy a new MAF/TIGER processing environment based on COTS and GIS tools.**

The 5 Objectives of MTEP

1. MAF/TIGER Accuracy Improvement Project (MTAIP)
2. Modern MAF/TIGER processing environment
3. **Geographic Partnerships**
   - **Expand and encourage geographic partnership programs with state, local and tribal governments, other federal agencies, and the private sector.**

The 5 Objectives of MTEP

1. MAF/TIGER Accuracy Improvement Project (MTAIP)
2. Modern MAF/TIGER processing environment
3. Geographic Partnerships
4. **American Community Survey Coverage Program**
   - **Implement the American Community Survey Coverage Program, primarily for rural areas, to ensure a complete and accurate MAF/TIGER nationwide.**

The 5 Objectives of MTEP

1. MAF/TIGER Accuracy Improvement Project (MTAIP)
2. Modern MAF/TIGER processing environment
3. Geographic Partnerships
4. American Community Survey Coverage Program
5. **Periodic evaluation activities**

- **Implement periodic evaluation activities to provide quality metrics, and to guide corrective actions needed to foster a fully effective national geocoding system**

The 5 Objectives of MTEP

1. **MAF/TIGER Accuracy Improvement Project (MTAIP)**
2. Modern MAF/TIGER processing environment
3. **Geographic Partnerships**
4. American Community Survey Coverage Program
5. Periodic evaluation activities

Objective One of the MTEP

MAF/TIGER ACCURACY IMPROVEMENT PROJECT (MTAIP)

MAF/TIGER Accuracy Improvement Project (MTAIP)

- **Correct the locations of streets and other map features (in TIGER);**
- **Correct the locations of housing units (in the MAF);**
- **Implement automated change detection methods.**

Harris and the Implementation of MTAIP

- 2002: partnered with the Harris Corporation;
  signed a contract for the implementation of the MTAIP.

- Harris Corporation Subcontracts Manager:

Mr. Christian Thomas
Harris Corporation
GCSD-IICS
PO BOX 9800
150 South Wickham Road
Melbourne, FL 32902-98000

Cthomas02@harris.com

Harris and the Implementation of MTAIP

Phase I (Completed December 18, 2002)

- Established the Technical Requirements
- Received Authorization to Proceed

Phase II (began January 3, 2003)

- Initial Qualification Testing
- Initial Production – February 2003

MTAIP…How do we Fix TIGER?

Primary Strategy:

Census Bureau Regional Office Geographers **acquire tribal, state, and local files** to be used as the reference source to correct the street locations, add missing roads, and update the road names.

Secondary Strategy:

Harris Corporation will obtain and use:

- highly accurate private sector GIS files **OR**
- Imagery to build street centerline files **OR**
- Field collects the street centerline information

MTAIP…Production Process

The major **elements of the production process** are:

- Source Evaluation, Selection, and Acquisition
- Geospatial Processing
- Address Processing (which is currently on hold)
- Discrepancy Resolution
- Product Delivery and Customer Acceptance, and
- Change Detection and Maintenance.

MTAIP…Desired Digital File Content

- Street Centerlines
- Boundaries (counties, places, Federally recognized tribal lands)
- Hydrography
- Rail Features
- Structure Coordinates or Building Footprints (w/ addresses)
- Cadastral or Tax Parcels
- Legal Entity Boundaries
- Census Statistical Entity Boundaries

MTAIP…Evaluation of Source Files

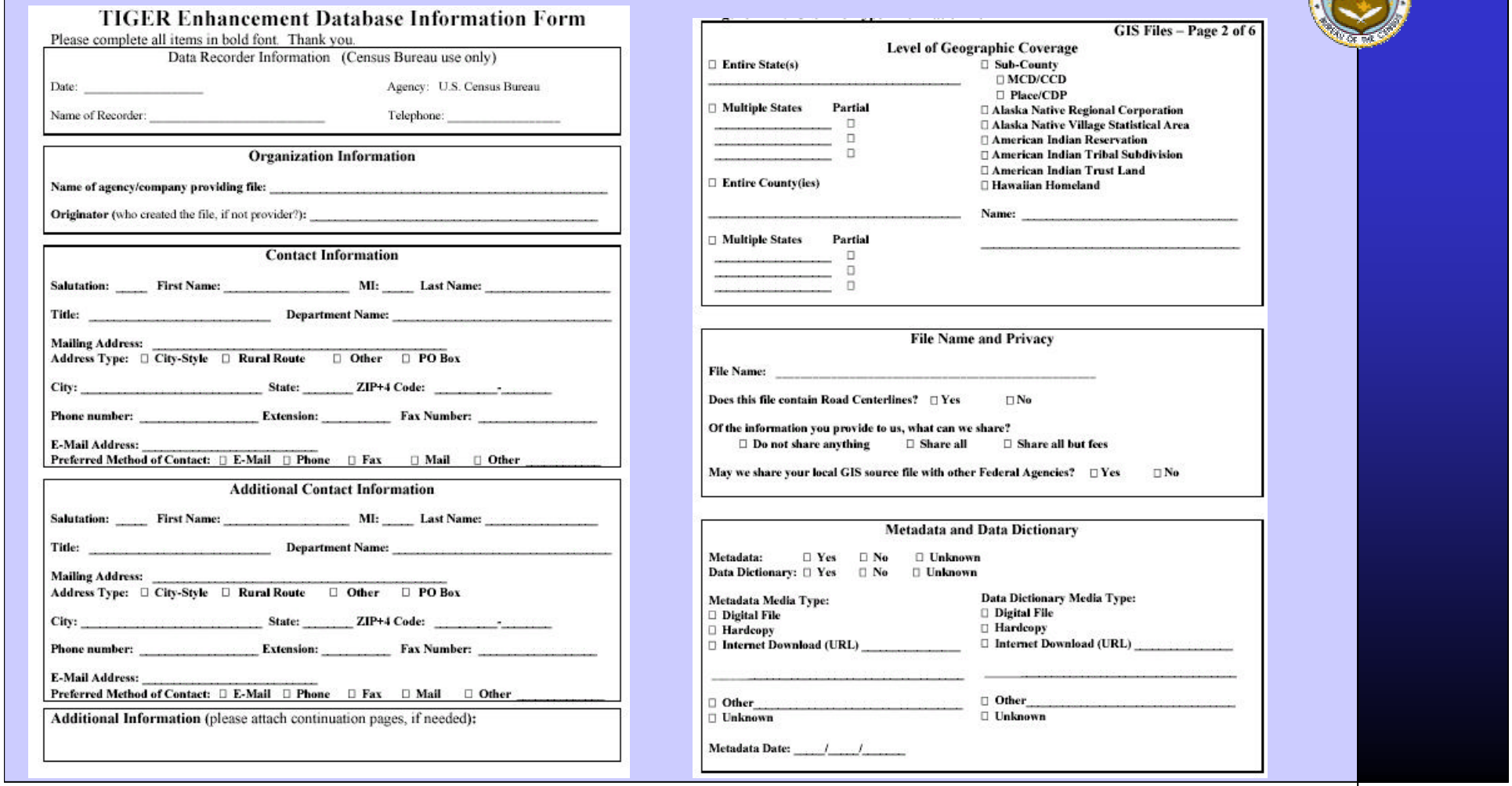
- Source files must meet the Census Bureau's **7.6 meter or better spatial accuracy requirement** for street centerline files
- The Census Bureau contracts out the field data collection of **110 GPS coordinate points** for street T-intersections, used to evaluate the **spatial accuracy** of each source file.
- Files that meet the **7.6 meter spatial accuracy requirement** (using circular error 95) are considered for the spatial coordinate enhancement of TIGER.
- **Attributes or other characteristics** of a file may be used if the file does not meet the CE 95 requirement
- **Addresses** and the **coordinates for structures**, as well as **boundaries** are evaluated separately.

MTAIP…Evaluation of Source Files

AND…

- The file must be provided without any royalty or copyright restrictions.

TIGER Enhancement Database Information Form



TIGER Enhancement Database Information Form

Please complete all items in bold font. Thank you.

Data Recorder Information (Census Bureau use only)

Date: _____ Agency: U.S. Census Bureau

Name of Recorder: _____ Telephone: _____

Organization Information

Name of agency/company providing file: _____

Originator (who created the file, if not provider?): _____

Contact Information

Salutation: ____ **First Name:** _____ **MI:** ____ **Last Name:** _____

Title: _____ **Department Name:** _____

Mailing Address: _____

Address Type: ☐ **City-Style** ☐ **Rural Route** ☐ **Other** ☐ **PO Box**

City: _____ **State:** _____ **ZIP+4 Code:** _____-_____

Phone number: _____ **Extension:** _____ **Fax Number:** _____

E-Mail Address: _____

Preferred Method of Contact: ☐ **E-Mail** ☐ **Phone** ☐ **Fax** ☐ **Mail** ☐ **Other** _____

Additional Contact Information

Salutation: ____ **First Name:** _____ **MI:** ____ **Last Name:** _____

Title: _____ **Department Name:** _____

Mailing Address: _____

Address Type: ☐ **City-Style** ☐ **Rural Route** ☐ **Other** ☐ **PO Box**

City: _____ **State:** _____ **ZIP+4 Code:** _____-_____

Phone number: _____ **Extension:** _____ **Fax Number:** _____

E-Mail Address: _____

Preferred Method of Contact: ☐ **E-Mail** ☐ **Phone** ☐ **Fax** ☐ **Mail** ☐ **Other** _____

Additional Information (please attach continuation pages, if needed):

GIS Files – Page 2 of 6

Level of Geographic Coverage

☐ **Entire State(s)** _____

☐ **Multiple States** **Partial**
_____ ☐
_____ ☐
_____ ☐

☐ **Entire County(ies)** _____

☐ **Multiple States** **Partial**
_____ ☐
_____ ☐
_____ ☐

☐ **Sub-County**
☐ **MCD/CCD**
☐ **Place/CDP**
☐ **Alaska Native Regional Corporation**
☐ **Alaska Native Village Statistical Area**
☐ **American Indian Reservation**
☐ **American Indian Tribal Subdivision**
☐ **American Indian Trust Land**
☐ **Hawaiian Homeland**

Name: _____

_____

File Name and Privacy

File Name: _____

Does this file contain Road Centerlines? ☐ **Yes** ☐ **No**

Of the information you provide to us, what can we share?
☐ **Do not share anything** ☐ **Share all** ☐ **Share all but fees**

May we share your local GIS source file with other Federal Agencies? ☐ **Yes** ☐ **No**

Metadata and Data Dictionary

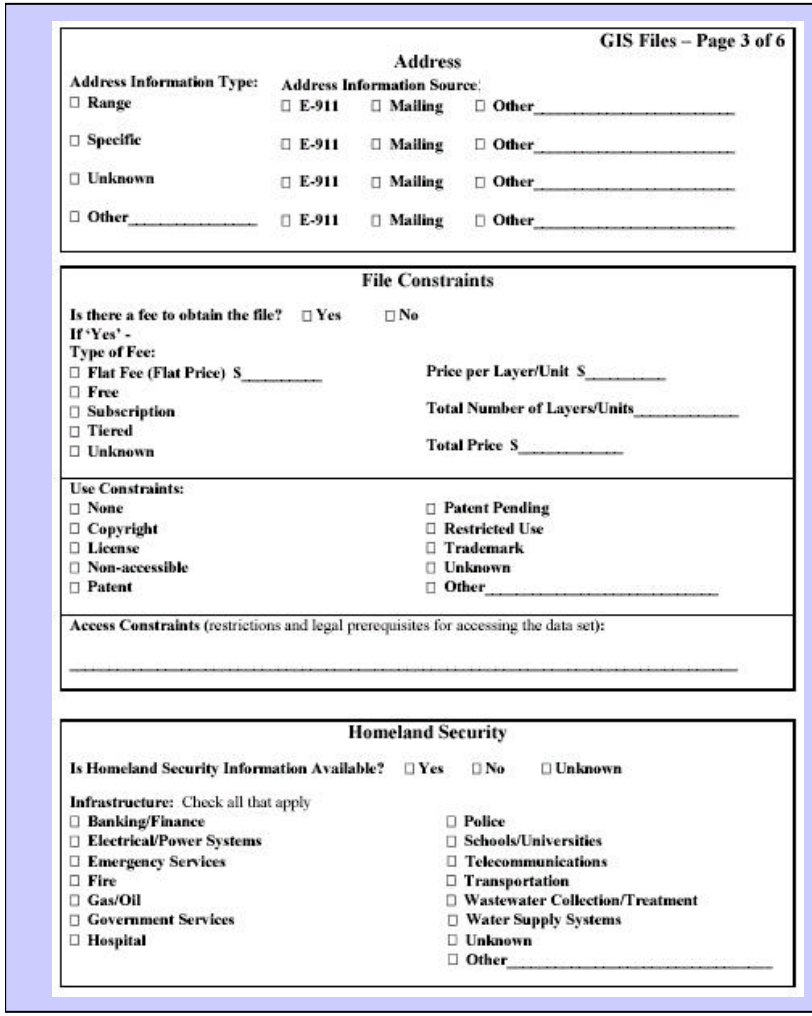
Metadata: ☐ **Yes** ☐ **No** ☐ **Unknown**
Data Dictionary: ☐ **Yes** ☐ **No** ☐ **Unknown**

Metadata Media Type:
☐ **Digital File**
☐ **Hardcopy**
☐ **Internet Download (URL)** _____
_____
☐ **Other**_____
☐ **Unknown**

Data Dictionary Media Type:
☐ **Digital File**
☐ **Hardcopy**
☐ **Internet Download (URL)** _____
_____
☐ **Other**_____
☐ **Unknown**

Metadata Date: ____/____/_____

TIGER Enhancement Database Information Form



GIS Files – Page 3 of 6

Address

Address Information Type:	Address Information Source:		
☐ Range	☐ E-911	☐ Mailing	☐ Other_____
☐ Specific	☐ E-911	☐ Mailing	☐ Other_____
☐ Unknown	☐ E-911	☐ Mailing	☐ Other_____
☐ Other_____	☐ E-911	☐ Mailing	☐ Other_____

File Constraints

Is there a fee to obtain the file? ☐ Yes ☐ No

If 'Yes' -

Type of Fee:

☐ Flat Fee (Flat Price) $_____ Price per Layer/Unit $_____

☐ Free

☐ Subscription Total Number of Layers/Units_____

☐ Tiered

☐ Unknown Total Price $_____

Use Constraints:

☐ None ☐ Patent Pending

☐ Copyright ☐ Restricted Use

☐ License ☐ Trademark

☐ Non-accessible ☐ Unknown

☐ Patent ☐ Other_____

Access Constraints (restrictions and legal prerequisites for accessing the data set):

_____

Homeland Security

Is Homeland Security Information Available? ☐ Yes ☐ No ☐ Unknown

Infrastructure: Check all that apply

☐ Banking/Finance ☐ Police

☐ Electrical/Power Systems ☐ Schools/Universities

☐ Emergency Services ☐ Telecommunications

☐ Fire ☐ Transportation

☐ Gas/Oil ☐ Wastewater Collection/Treatment

☐ Government Services ☐ Water Supply Systems

☐ Hospital ☐ Unknown

☐ Other_____

Photocopy pages 4, 5, and 6 for each layer that is in your file. You may include multiple layers on a single form if those layers are from the same source. Select a layer(s)/source combination on this page and then complete pages 5 and 6 for that layer(s)/source.

Layers and Sources

Layers

☐ Boundaries* (select types below) ☐ Powerlines

☐ Building Footprints ☐ Railroads

☐ Hydrography ☐ Roads** (select types below)

☐ Landmarks ☐ Structure Coordinates

☐ Parcels ☐ Unknown

☐ Physical Features ☐ Other _____

☐ Pipelines

Sources

☐ Aerial Photo – Digital ortho quarter quads (DOQQ) ☐ Parcel Map

☐ Aerial Photos – Not DOQQ ☐ TIGER/Line 1990

☐ Aerial Photo – Unknown ☐ TIGER/Line 2000

☐ DLG ☐ USGS Hydrographic Database

☐ Dynamap ☐ USGS Topo Quads

☐ E-911 ☐ Unknown

☐ GPS ☐ Other _____

* Boundaries

☐ County or Equivalent Area ☐ Department of Defense (DOD) School District

☐ Legal County Subdivision ☐ Railroads

☐ Legal County Subdivision ☐ Department of Defense (DOD) School District

☐ Incorporated Place ☐ Bureau of Indian Affairs (BIA) School District

☐ Subbarrio ☐ Traffic Analysis Zone

☐ American Indian Reservation ☐ Parcel/Cadastral

☐ American Indiana Trust Land ☐ School Attendance Area

☐ American Indiana Tribal Subdivision ☐ Tribal/Local Legislative District

☐ Alaska Native Village ☐ Zoning

☐ Alaska Native Village Regional Corporation ☐ Empowerment Zone/Enterprise District /Brownfields

☐ Hawaiian Home Land

☐ Congressional District ☐ Neighborhood

☐ State Legislative District (upper chamber) ☐ Special Government Districts

☐ State Legislative District (lower chamber) ☐ Township and Range

☐ Voting District ☐ Flood Plain/Wetlands

☐ Urban Growth Area ☐ Land Cover

☐ Unified School District ☐ Hypsography

☐ Secondary School District ☐ Monumented Boundary Points

☐ Elementary School District ☐ Airports

** Roads

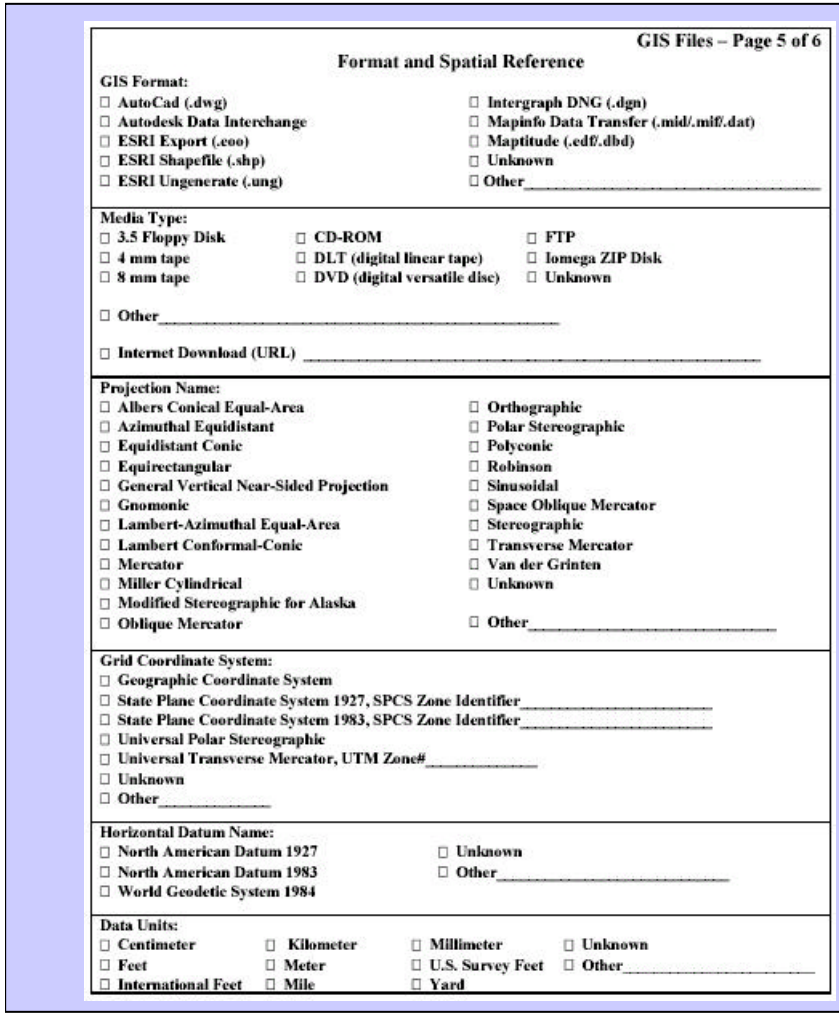
☐ County/State Highway ☐ Private Roads

☐ Interstate Highway ☐ U.S. Highway

☐ Driveways ☐ Vehicular Trail

☐ Local and Rural Roads, City Streets ☐

TIGER Enhancement Database Information Form



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Format and Spatial Reference

GIS Format:

- ☐ AutoCad (.dwg)
- ☐ Autodesk Data Interchange
- ☐ ESRI Export (.eoo)
- ☐ ESRI Shapefile (.shp)
- ☐ ESRI Ungenerate (.ung)
- ☐ Intergraph DNG (.dgn)
- ☐ Mapinfo Data Transfer (.mid/.mif/.dat)
- ☐ Maptitude (.edf/.dbd)
- ☐ Unknown
- ☐ Other_____

Media Type:

- ☐ 3.5 Floppy Disk
- ☐ 4 mm tape
- ☐ 8 mm tape
- ☐ CD-ROM
- ☐ DLT (digital linear tape)
- ☐ DVD (digital versatile disc)
- ☐ FTP
- ☐ Iomega ZIP Disk
- ☐ Unknown
- ☐ Other_____
- ☐ Internet Download (URL) _____

Projection Name:

- ☐ Albers Conical Equal-Area
- ☐ Azimuthal Equidistant
- ☐ Equidistant Conic
- ☐ Equirectangular
- ☐ General Vertical Near-Sided Projection
- ☐ Gnomonic
- ☐ Lambert-Azimuthal Equal-Area
- ☐ Lambert Conformal-Conic
- ☐ Mercator
- ☐ Miller Cylindrical
- ☐ Modified Stereographic for Alaska
- ☐ Oblique Mercator
- ☐ Orthographic
- ☐ Polar Stereographic
- ☐ Polyconic
- ☐ Robinson
- ☐ Sinusoidal
- ☐ Space Oblique Mercator
- ☐ Stereographic
- ☐ Transverse Mercator
- ☐ Van der Grinten
- ☐ Unknown
- ☐ Other_____

Grid Coordinate System:

- ☐ Geographic Coordinate System
- ☐ State Plane Coordinate System 1927, SPCS Zone Identifier_____
- ☐ State Plane Coordinate System 1983, SPCS Zone Identifier_____
- ☐ Universal Polar Stereographic
- ☐ Universal Transverse Mercator, UTM Zone#_____
- ☐ Unknown
- ☐ Other_____

Horizontal Datum Name:

- ☐ North American Datum 1927
- ☐ North American Datum 1983
- ☐ World Geodetic System 1984
- ☐ Unknown
- ☐ Other_____

Data Units:

- ☐ Centimeter
- ☐ Feet
- ☐ International Feet
- ☐ Kilometer
- ☐ Meter
- ☐ Mile
- ☐ Millimeter
- ☐ U.S. Survey Feet
- ☐ Yard
- ☐ Unknown
- ☐ Other_____

GIS Files – Page 6 of 6

Status and Maintenance

Currentness Reference: ☐ Ground Condition ☐ Publication Date ☐ Unknown

Publication Date (if published): ___/____/_____ **Date of Last Update:** ___/____/_____

Progress: ☐ Complete ☐ In Work ☐ Planned ☐ Unknown

If 'In Work' or 'Planned,' Month/Year expected to complete: ___/_____

Version: _____ **Version in Progress:** _____

Update Frequency:

- ☐ Annually
- ☐ As Needed
- ☐ Bi-Annually
- ☐ Continually
- ☐ Daily
- ☐ Monthly
- ☐ None Planned
- ☐ Quarterly
- ☐ Weekly
- ☐ Unknown
- ☐ Other_____

Data Quality

		Numerical Value	Unit of Measurement	
Positional Accuracy:	☐ Known	_____	_____	☐ Unknown
Urban Accuracy:	☐ Known	_____	_____	☐ Unknown
Rural Accuracy:	☐ Known	_____	_____	☐ Unknown

Spatial Domain (Latitude/Longitude)

West Bounding Coordinate: _____

East Bounding Coordinate: _____

North Bounding Coordinate: _____

South Bounding Coordinate: _____

TED Extract – GIS Files

Created August 8, 2003 4:21 pm

FILE NAME	ID	Partial Coverage?	Latest Lyr Publication Date	Road Centerlines?	GIS Data: Roads	Boundaries	Hydrography	Railroads	Power Lines	Other	Contains Addresses ?
16 Idaho											
National Highway Planning Network-Node	(509193)		1/01/2002	Y	x						
National Rail Network-Nodes	(509195)		1/01/2002					x			
National Rail Network- Line	(509196)		1/01/2002					x			
USGS/EPA - National Hydrography Dataset	(509203)		7/01/1999				x				
USGS DLG-3; Boundary	(509231)		1/01/2002	Y		x					
USGS DLG-3 Transportation	(509243)		1/01/2002	Y	x			x	x	x	
16001 Ada											
Bonneville Power Administration - NW US	(500586)		7/31/2003						x	x	
National Highway Planning Network-Node	(509193)		1/01/2002	Y	x						
National Rail Network-Nodes	(509195)		1/01/2002					x			
National Rail Network- Line	(509196)		1/01/2002					x			
National Highway Planning, Line Files	(509200)		1/01/2002		x						
USGS/EPA - National Hydrography Dataset	(509203)		7/01/1999				x				
USGS DLG-3; Boundary	(509231)		1/01/2002	Y		x					
USGS DLG-3 Transportation	(509243)		1/01/2002	Y	x			x	x	x	
Ada County - GIS Dataset	(509273)		7/15/2003	Y	x	x	x	x		x	Y

File Provider	Contact ID
Federal Highway Administration	224081
Federal Railroad Administration	224082
Federal Railroad Administration	224082
USGS- National Hydrography Dataset	224095
USGS	224102
USGS	224102
Bonneville Power Administration, US DOE	211904
Federal Highway Administration	224081
Federal Railroad Administration	224082
Federal Railroad Administration	224082
Federal Highway Administration	224081
USGS- National Hydrography Dataset	224095
USGS	224102
USGS	224102
Ada County	187580

MTAIP Production Processing Threads

THREAD 1 (Good GIS for all feature classes)

	ROADS	BOUND	HYDRO	RR/OTHER
FIELD COLLECT				
COUNTY GIS	X	X	X	X
PARTIAL GIS				
COMM GIS				
COMM IM				
DOQQ				
NHD FEATURES				

THREAD 2 (Good GIS limited layers)

	ROADS	BOUND	HYDRO	RR/OTHER
FIELD COLLECT				
COUNTY GIS	X	X		
PARTIAL GIS				
COMM GIS				
COMM IM				
DOQQ				X
NHD FEATURES			X	

THREAD 3 (Good GIS limited layers)

	ROADS	BOUND	HYDRO	RR/OTHER
FIELD COLLECT				
COUNTY GIS	X	X	X	
PARTIAL GIS				
COMM GIS				
COMM IM				
DOQQ				X
NHD FEATURES				

THREAD 4 (Multiple partial GIS files, e.g., towns plus county)

	ROADS	BOUND	HYDRO	RR/OTHER
FIELD COLLECT				
COUNTY GIS				
PARTIAL GIS	X	X	X	X
COMM GIS				
COMM IM				
DOQQ				
NHD FEATURES			X	

THREAD 5 (Field collect augmented by other sources)

	ROADS	BOUND	HYDRO	RR/OTHER
FIELD COLLECT	X			
COUNTY GIS				
PARTIAL GIS				
COMM GIS				
COMM IM				
DOQQ				X
NHD FEATURES			X	
TIGER		X		

THREAD 6 (GIS for Roads augmented by other sources for other layers)

	ROADS	BOUND	HYDRO	RR/OTHER
FIELD COLLECT				
COUNTY GIS				
PARTIAL GIS				
COMM GIS	X			
COMM IM				
DOQQ				X
NHD FEATURES			X	
TIGER		X		

THREAD 7 (Imagery for roads relying on TIGER attribution)

	ROADS	BOUND	HYDRO	RR/OTHER
FIELD COLLECT				
COUNTY GIS				
PARTIAL GIS				
COMM GIS				
COMM IM	X			
DOQQ				X
NHD FEATURES			X	
TIGER	X	X		

THREAD 8 (Partial government GIS w/ field collection for surrounding areas)

	ROADS	BOUND	HYDRO	RR/OTHER
FIELD COLLECT	X			
COUNTY GIS				
PARTIAL GIS	X	X	X	
COMM GIS				
COMM IM				
DOQQ				X
NHD FEATURES			X	
TIGER		X		

THREAD 9 (Partial geoextent GIS plus commercial GIS for surrounding areas)

	ROADS	BOUND	HYDRO	RR/OTHER
FIELD COLLECT				
COUNTY GIS				
PARTIAL GIS	X	X		
COMM GIS	X			
COMM IM				
DOQQ				X
NHD FEATURES			X	
TIGER		X		

THREAD 10 (Partial geoextent GIS, imagery for surrounding areas)

	ROADS	BOUND	HYDRO	RR/OTHER
FIELD COLLECT				
COUNTY GIS				
PARTIAL GIS	X	X		
COMM GIS				
COMM IM	X			
DOQQ				X
NHD FEATURES			X	
TIGER		X		

THREAD 11 (Partial geoextent GIS, imagery and field collection for varying parts of surrounding area)

	ROADS	BOUND	HYDRO	RR/OTHER
FIELD COLLECT	X			
COUNTY GIS				
PARTIAL GIS	X	X		
COMM GIS				
COMM IM	X			
DOQQ				X
NHD FEATURES			X	
TIGER		X		X

THREAD 12 (Field collect for features and structure locations to support the pilot study)

	ROADS	BOUND	HYDRO	RR/OTHER
FIELD COLLECT w/ addresses	X			
COUNTY GIS				
PARTIAL GIS				
COMM GIS				
COMM IM				
DOQQ				X
NHD FEATURES			X	
TIGER		X		

THREAD 13 (Low spatial accuracy GIS/ good attribution augmented by good accuracy imagery)

	ROADS	BOUND	HYDRO	RR/OTHER
FIELD COLLECT	X			
COUNTY GIS	X	X		
PARTIAL GIS				
COMM GIS	X			
COMM IM	X			
DOQQ				X
NHD FEATURES			X	
TIGER		X		

THREAD 14 (Low spatial accuracy GIS/good attribution & spatial geoextent, augmented by good accuracy imagery)

	ROADS	BOUND	HYDRO	RR/OTHER
FIELD COLLECT	X			
COUNTY GIS				
PARTIAL GIS	X	X		
COMM GIS	X			
COMM IM	X			
DOQQ				X
NHD FEATURES			X	
TIGER		X		

THREAD 15 (GIS for Roads augmented by other sources f other layers)

	ROADS	BOUND	HYDRO	RR/OTHER
FIELD COLLECT				
COUNTY GIS	X			
PARTIAL GIS				
COMM GIS				
COMM IM				
DOQQ				X
NHD FEATURES			X	
TIGER		X		

Notes:

In all cases, DOQQs will be used as reference when available

In all cases, NHD will be used for reach codes. The NHD entries above pertain to use of NHD for feature alignment

In some cases, we may opt to simply rubber sheet TIGER data for RR/Other

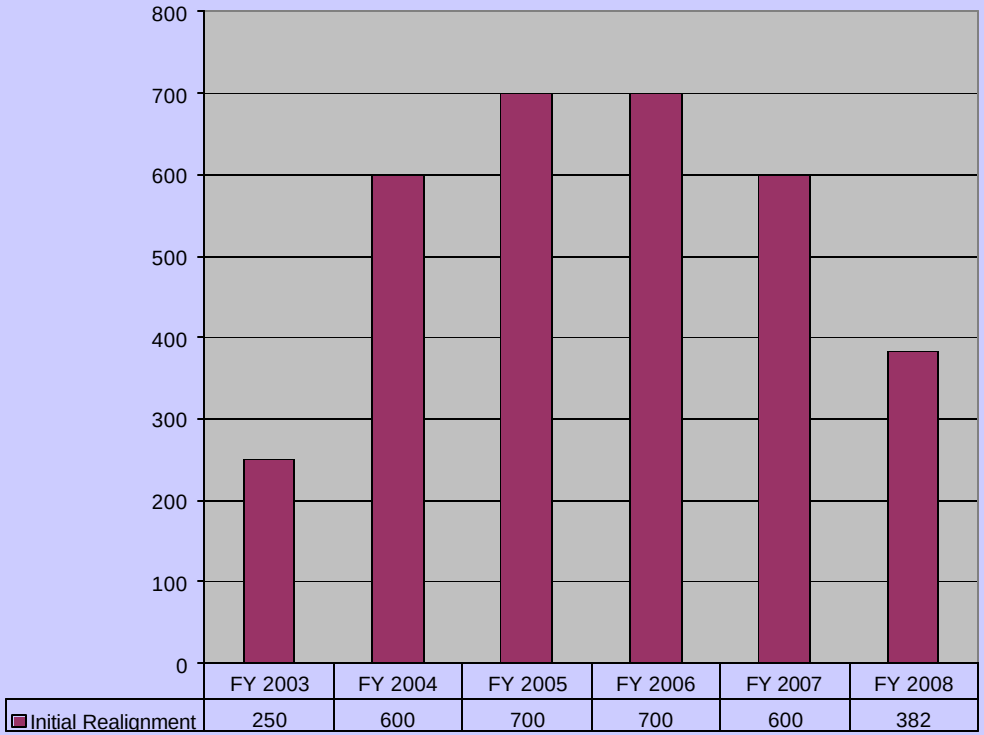
Note that TIGER appears as a source type. Actually it cannot be the reference for fixing itself. But in some cases for Boundareis, it may be the best data

Note that source decisions on commercial imagery versus DOQQ as reference for alignment may lead to different costs, bu tht processing thread for the imagery is the same.

Contingency threads will be created to handle special cases such as the portions of Alaska for which ther is no NHD or for addressing harvesting scenarios if they become part fo the program.

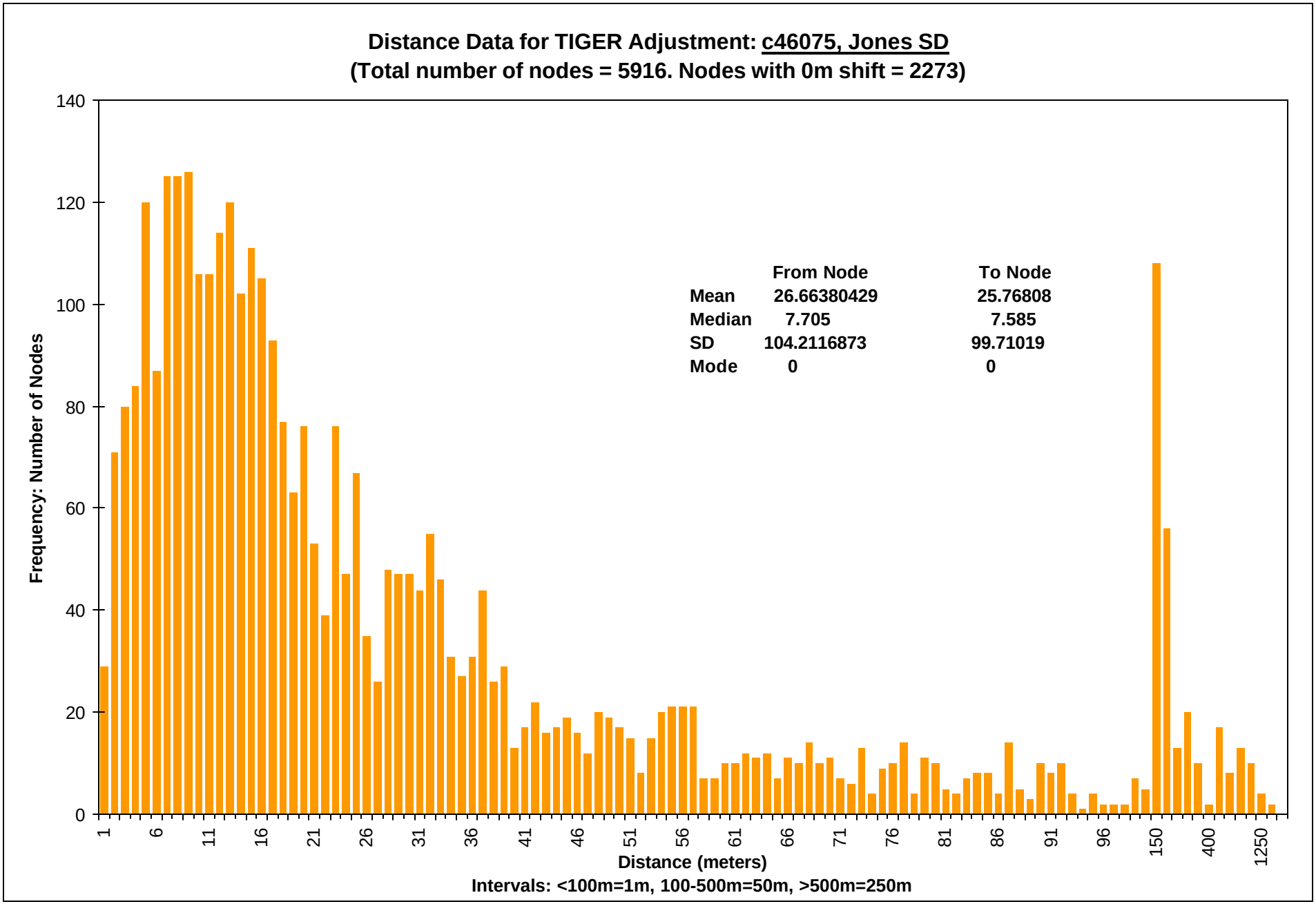
MTAIP…Production Schedule

Projected Annual Production by Fiscal Year (October – September)



MTAIP…Providing Feedback to Source Providers

- Confirmation of **documented metadata**
- Written documentation containing the **results of the 110 GPS point evaluation** of the local source file
- Frequency distribution graphs and other **statistics** showing range of coordinate adjustment for nodes,
- Written documentation concerning the **suitability of data** within the file, such as boundaries and addresses
- Enhanced **TIGER/Line file**


Distance Data for TIGER Adjustment: c46075, Jones SD
(Total number of nodes = 5916. Nodes with 0m shift = 2273)
Frequency: Number of Nodes
140
120
100
80
60
40
20
0
From Node
To Node
Mean 26.66380429 25.76808
Median 7.705 7.585
SD 104.2116873 99.71019
Mode 0 0
1
6
11
16
21
26
31
36
41
46
51
56
61
66
71
76
81
86
91
96
150
400
1250
Distance (meters)
Intervals: <100m=1m, 100-500m=50m, >500m=250m

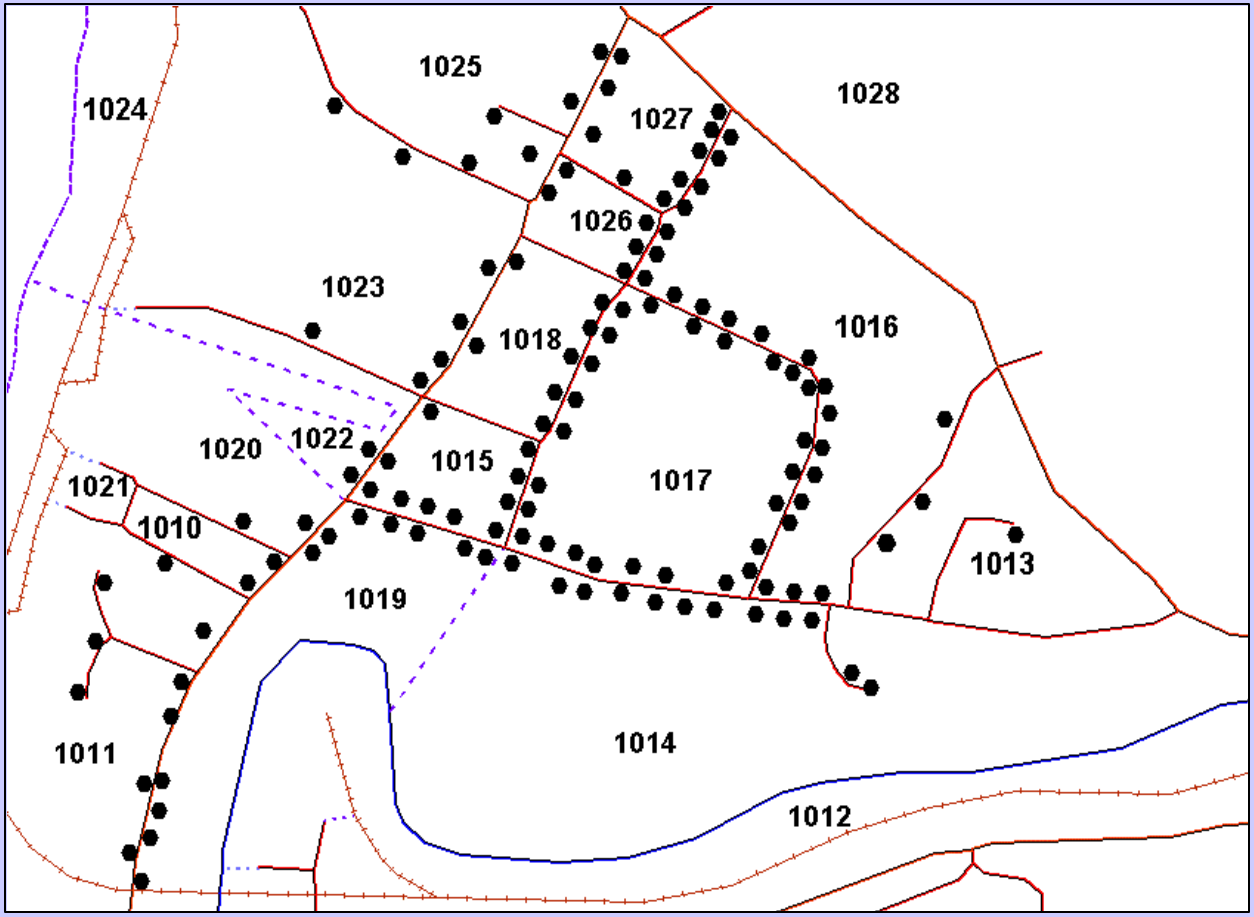
MTAIP vs BAS

- **Boundaries for all entities will have to be reviewed relative to the more accurate roads.**
  - Each BAS (Boundary and Annexation Survey) cycle will include all entities, regardless of population, in partitions that have completed the MTAIP process since (or during) the previous BAS cycle (year).
  - Census Bureau staff can do some of the boundary adjustments but most will need to be done by Boundary and Annexation Survey (BAS) officials.

MTAIP…End Result

- **A highly accurate street centerline "digital map" (geographic data base) of the entire United States, Puerto Rico, and the associated Island Areas.**
- **Correct locations in the MAF/TIGER, and devices equipped with GPS receivers, will provide the tools field staff need to find the correct housing unit/GQ and validate the accuracy of each address.**
- **Highly accurate MAF/TIGER locations will foster use of GPS locational technology for the American Community Survey and the 2010 Census.**

MTAIP…End Result



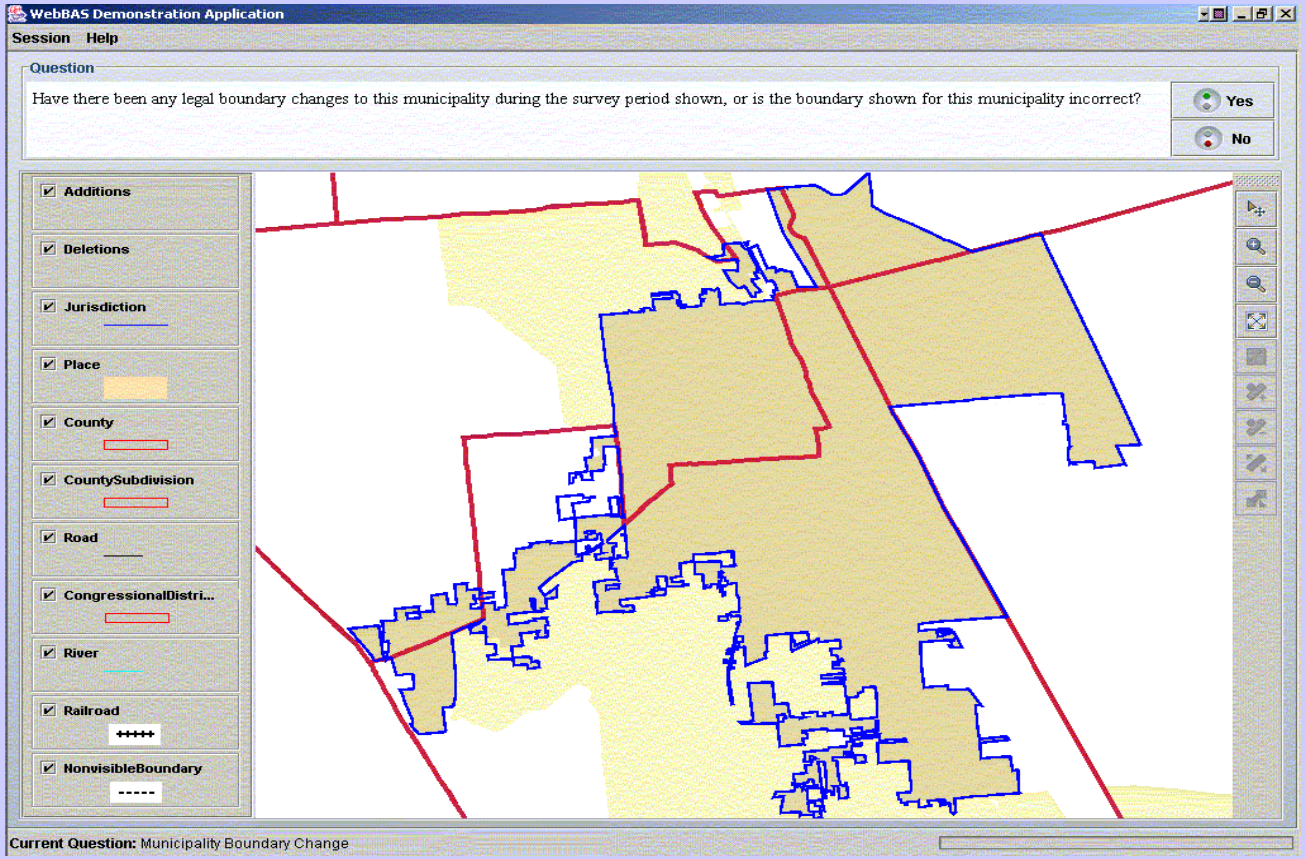
MTAIP – End Result (continued)

- **Easier exchange of data and use of census geography in local GIS and The National Map.**
- **Potential for exchange and update of geographic data via a web application.**
- **BAS via a web application (CIPI-2)**

Exchange and Maintenance of GIS files is a new and growing field.

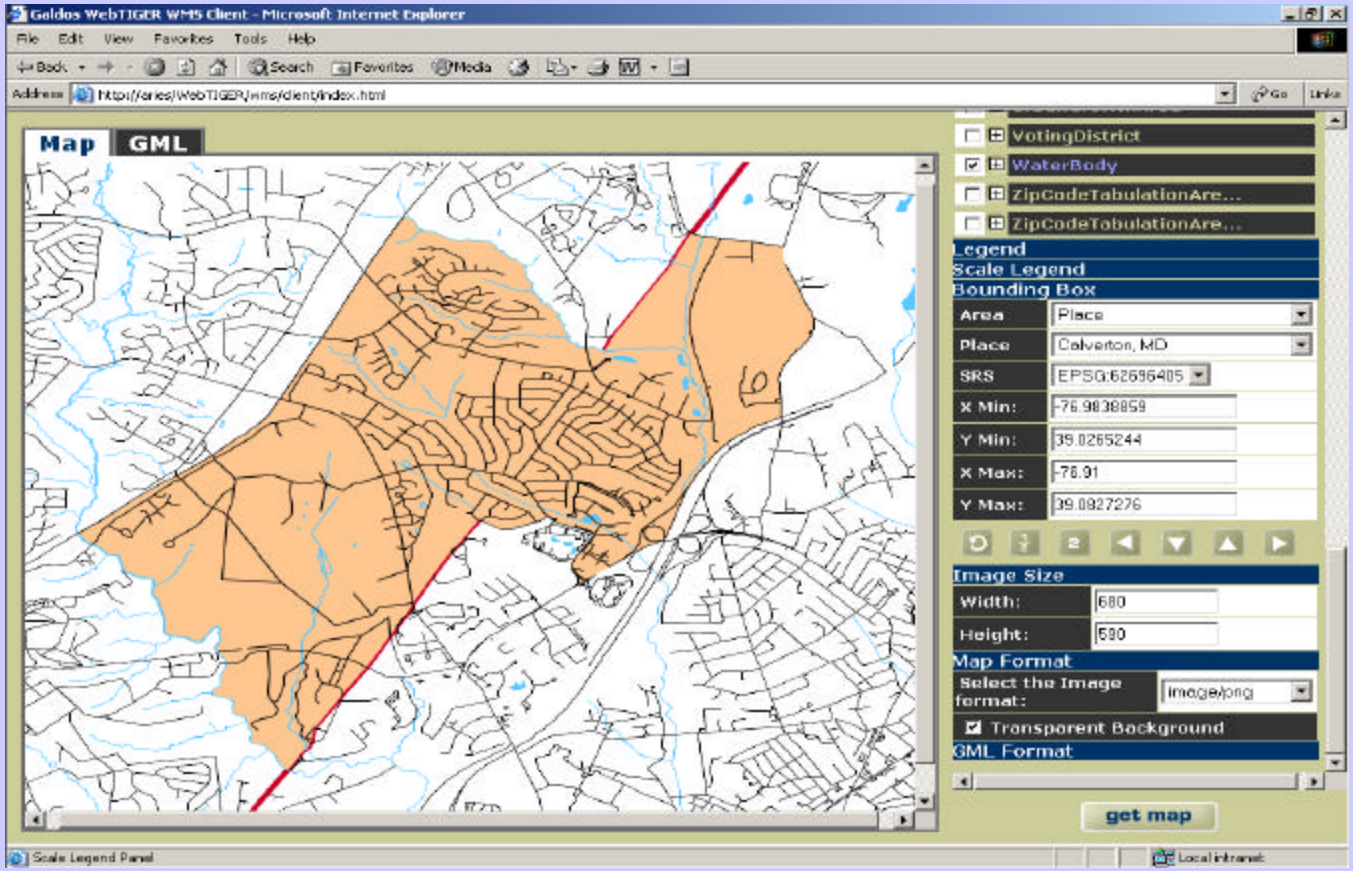
Web Applications Being Tested:

Web BAS



Web Applications Being Tested:

Web TIGER Map



Objective Three of the MTEP

Geographic Partnerships

Why Geographic Partnerships?

- **Census Address List Improvement Act of 1994 (Public Law 103-420)**
- **Experience in the 2000 Decennial Census**
- **Duplication of Effort**
- **Lack of Funds / Coordination of Funds and resources**

Why Geographic Partnerships?

- **Expand and encourage geographic partnerships with all sectors of government, the organizations that serve them, and the private sector**
- To accomplish this objective the Census Bureau will:
  - **Develop and deploy new strategies to**:
    - ➡ **Communicate** more effectively with these groups
    - ➡ **Increase participation** in geographic programs
    - ➡ **Effectively integrate** the address list review program, street centerline update program, and boundary reporting programs that now exist as separate programs.
  - **Establish new partnerships** that can be used to improve the accuracy, currency and coverage of the MAF/TIGER databases.

Coordinating the Geographic Partnerships Program

- National Geographic Partnerships Team
- Tribal/State Geographic Partnerships Branch
- Local Geographic Partnerships Branch

- The Census Bureau's Field Regional Offices

National Geographic Partnerships Team

- Develops geographic standards and represents the Census Bureau on various national and international geographic standards bodies.
  - Federal Geographic Data Committee (FGDC)
  - Geospatial One-Stop E-government Committee
  - Technical Committee 211 of the International Standards Organization
  - Chairs the FGDC Subcommittee on Cultural and Demographic Data
- Manages relationships with federal agencies and national-level organizations (excluding the U.S. Postal Service).

Tribal/State Geographic Partnerships Branch

- Coordinates all tribal and state geographic partnership programs
- Coordinates these partnership programs with the organizations that represents them, such as
  - Urban and Regional Information Systems Association (URISA)
  - National Congress of American Indians
  - State Data Centers Program
  - Census Bureau's Advisory Committee
  - National States Geographic Information Council
- Acts as liaison with commercial data content providers.
- Develops new partnerships and methods to work with tribal and state governments and organizations that have digital address and geographic files

Local Geographic Partnerships Branch

- Coordinates all regional, county, and local geographic partnership programs
- Coordinates these partnership programs with various organizations representing local governments, such as
  - National Association of Towns and Townships
  - National Association of Counties
  - National Emergency Numbers Association
- Responsible for the design, coordination, and execution of all geographic programs, such as
  - Acquisition of digital files
  - Local Update of Census Addresses Program (LUCA)
  - Statistical Areas
  - Boundary and Annexation Survey (BAS)

Field Regional Offices

- Responsible for the day-to-day contact with tribal, state, and local governments for all geographic programs.
- First-level contact for all questions and issues initiated by geographic program participants
- Responsible for implementation of all geographic programs, such as
  - Inventory of available resources (TED)
  - Resource sharing recommendations
  - Acquisition of digital files for MTAIP
  - Local Update of Census Addresses Program (LUCA)
  - Count Question Resolution Program

MTAIP and Geographic Partnerships

How can YOU participate?

- Provide the Census Bureau (via the Regional Geographers) with GIS files that meet our accuracy requirements and have good written descriptions of the contents (metadata)
- Continue to participate in the Boundary and Annexation Survey so we can represent the boundary information accurately
- Keep the Regional Geographers informed / involved in data development activities

MTAIP and Geographic Partnerships

What is the return to our partners?

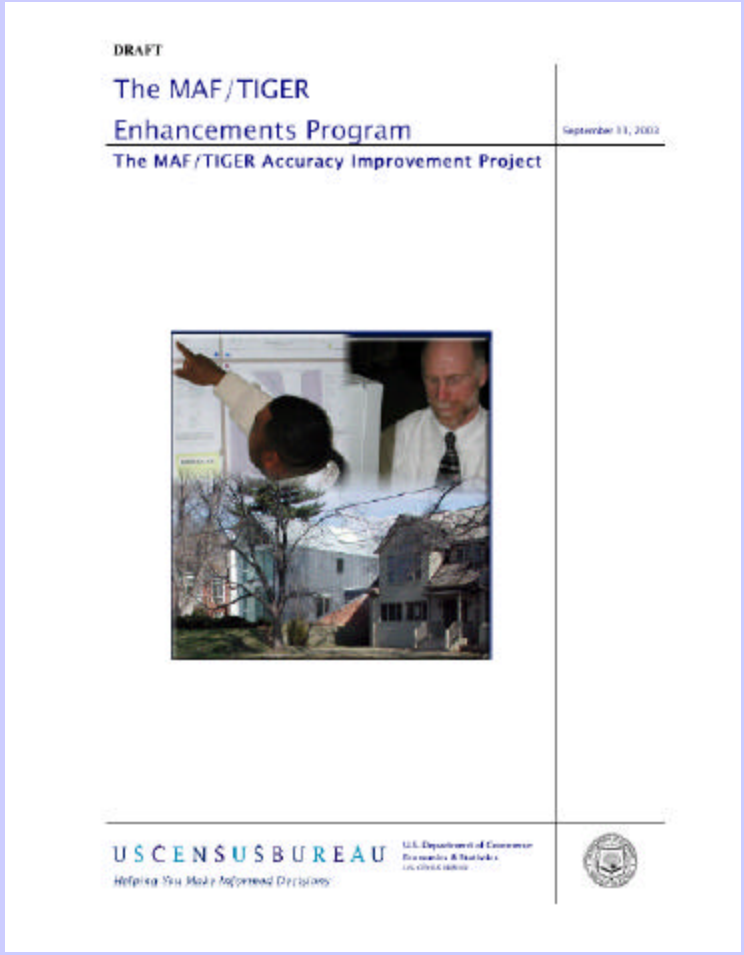
- **Improved address and map accuracy!**
- More effective geographic partnerships
- A source for The National Map, Geospatial One-Stop, and the National Spatial Data Infrastructure
- A major contribution to a more effective / lower cost 2010 Census, ACS, and other household survey operations.

MTAIP and Geographic Partnerships

What is the return to our partners (continued) ?

- BAS via a web application (CIPI – 2)
- Easier exchange of geographic data and use of census geography in local GIS
- "Enhanced" TIGER/Line (before general distribution)
- Potential for exchange and update of geographic data via web applications (exchange and maintenance of GIS files is a new and growing field)

More Information…MAF/TIGER Enhancements Program Booklet



More Information

Census Bureau's Website:
www.census.gov

MTAIP
http://www.census.gov/geo/mod/partner.html

TIGER/Line
http://www.census.gov/geo/www/tiger/index.html

Thank You

Questions ???????

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